



SPACE SHUTTLE PROGRAM
Space Shuttle Vehicle Engineering Office
NASA Johnson Space Center, Houston, Texas



STS-108 FLIGHT READINESS REVIEW

**FERRY READINESS
November 15, 2001**



STS-108 Flight Readiness Review Ferry Readiness

Presenter **Don L. McCormack, Jr.**

Date **Nov 15, 2001**

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Ferry Plan Summary

- Ferry Planning Readiness Review conducted on 11/9/01 with no issues identified
- Ferry Flight Readiness Review to be conducted one day prior to planned ferry date
- Hardware summary:
 - Orbiter: OV-105 (Endeavour)
 - NEOM ferry weight (lbs): 226942 (no fluids off-loaded)
 - NEOM ferry center of gravity (in): X_o 1113.8 Y_o -0.2 Z_o 375.0
 - » NEOM mass properties are within specified limits – the Orbiter middeck ballast kit is not required
 - Attach hardware and ferry plugs are ready to support
 - Tailcone 2 ready to support
 - Shuttle Carrier Aircraft (SCA): NASA 911
- Configuration drawings have been released



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Ferry Plan Summary - Continued

- DFRC seven day turnaround with ready-to-ferry on day seven (mid-day)
 - Most likely departure will be morning of day eight
- Flight plan – the weight of the Orbiter will likely require 4-flight legs to complete the ferry flight over a 2-day period:
 - Day 1: Flight legs 1 and 2 (refuel stop and refuel/rest overnight stop)
 - Day 2: Flight legs 3 and 4 (refuel stop and arrival at KSC SLF)
- Prime landing sites, weather alternates and emergency landing fields selected
- Pathfinder: USAF C-141 or C-17 (purge equipment required)
- Purge – purge equipment will be deployed due to the potential temperatures at ferry overnight stop locations
 - Purge circuit 1 (OMS/RCS – ambient air temperature below 45 °F)
 - Purge circuit 2 (not required for passive MPLM)



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STS-108 FERRY READINESS STATEMENT

A Ferry Planning Readiness Review was conducted in accordance with the Space Shuttle Vehicle Engineering Office flight preparation process plan contained in NSTS 08117, Requirements and Procedures for Certification of Flight Readiness. This certifies that aircraft, equipment, and ferry requirements are ready to support Orbiter ferry operations.

**Don L. McCormack, Jr.
MV/Manager, Ferry Operations**